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AMSAT NEWS SERVICE
ANS-337

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The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, the Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor [at] amsat [dot] org.

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see: https://mailman.amsat.org/postorius/lists/ans.amsat.org/

ANS-337 AMSAT News Service Weekly Bulletins

To: All RADIO AMATEURS
From: Radio Amateur Satellite Corporation
712 H Street NE, Suite 1653
Washington, DC 20002

DATE 2023 DEC 03

Update on AMSAT's Participation in ESA Geostationary Project

Following the recent AMSAT Symposium where David Bowman, G0MRF, presented information on the ESA Geostationary payload investigation, an offer was extended to AMSAT to participate with AMSAT-UK in developing a proposal for submittal to ESA. AMSAT Director and Vice President - Operations Drew Glasbrenner, KO4MA, volunteered on short notice to represent AMSAT in these initial discussions. An additional Canadian AMSAT representative is desired and welcome to participate in future meetings and discussions.

After a meeting on November 26th, an initial proposal to ESA was being finalized for submittal on December 4th. More information will be forthcoming soon.

[ANS thanks AMSAT Director and Vice President - Operations Drew Glasbrenner, KO4MA, for the above information.]

September/October 2023 Edition of The AMSAT Journal Available

AMSAT members can now go to the member portal (https://launch.amsat.org/) and download the latest edition on The AMSAT Journal. The AMSAT Journal is published online in full-color. This edition is 38 pages jam-packed with the latest updates on key AMSAT projects. Topics in this issue include:

- Apogee View - Robert Bankston, KE4AL, AMSAT President
- AMSAT Awards Update - Bruce Paige, KK5DO, AMSAT Awards Manager
- Education and CubeSat Simulator Update - Alan Johnston, KU2Y, AMSAT VP, Educational Relations
- PACSAT BBS Operations - Chris Thompson, G0KLA/AC2CZ/VE2TCP
- PACSAT Software Architecture - Chris Thompson, G0KLA/AC2CZ/VE2TCP and Burns Fisher, WB1FJ
- ARISS Update - Dave Taylor, W8AAS
- Engineering Update - Jerry Buxton, N0JY; Jonathan Brandenburg, KF5IDY; Zach Metzinger, N0ZGO

Attention AMSAT members: You should receive an email alert that a new edition of The AMSAT Journal is available. If you are not receiving that email, it means your email is not on file in out membership system. You can add or update your email information by logging in the member portal (https://launch.amsat.org/) and updating your profile. If you have trouble doing this, please write info[at]amsat[dot]org and we will assist you.

[ANS thanks AMSAT for the above information.]

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The transmissions are part of the Moscow Aviation Institute SSTV experiment (MAI-75) and will be made from the amateur radio station RS0ISS in the Russian ISS Service module (Zvezda) using a Kenwood TM-D710E transceiver. It appears the theme for this session will highlight one of MAI's cosmonaut graduates - Yuri Usachov. Currently scheduled days and times are:

Thu 2023-12-07 08:55 UTC to 14:25 UTC
Fri 2023-12-08 08:15 UTC to 14:10 UTC

Days and times are subject to change due to the operational requirements of the ISS.

Reminder - No ARISS award will be available for this session since it is not transmitted globally.

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information.]

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K6VHF	201	250
N7GR	179	205
K9JKM	114	201
JF3MKC	175	200
JI5RPT/1	101	200
K9AQ	109	200
WD9EWK (DM45)	160	165
N4QX	152	157
AA0DW	New	141
N6UTC (DM15)	New	126
JF1CDX	New	105
KT6CA	New	103
W3TI	101	103
NJ2DX	New	100

Congratulations to the new VUCC holders.
AL7ID is first VUCC Satellite holder from BP64

+ DXCC Satellite Award/Endorsement Change Summary for November 01, 2023 to December 01, 2023.

OE9DGV	208	210
F6BKI	203	207
YO2CMI	169	173
ZS1LS	153	160
EA2AA	152	154
DL6GBM	125	152
HB9RYZ	137	139
LA6OP	123	136
SP3AU	130	136
DL9RAN	100	125
FG8OJ	111	114
SM2OAN	100	109
CT1ETE	New	104
TF1A	100	102
JA0FSB	New	101
K9UO	100	101
EA5RM	New	100
KB9STR	New	100
KN2K	New	100
LA0FA	New	100
N0JE	New	100

Congratulations to the new DXCC Satellite holders.
KN2K is first DXCC Satellite holder from VA

[ANS thanks Jon Goering, N7AZ, for the above information.]

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The following satellites have been added to this week's AMSAT-NA TLE distribution:

HADES-D NORAD Cat ID 58294 IARU coordinated downlink on 436.666 MHz
VERONIKA NORAD Cat ID 58261 IARU coordinated downlink on 436.680 MHz
KAFASAT NORAD Cat ID 58317 IARU coordinated downlinks 435.835 MHz and 2404.400 MHz

AMSAT thanks Nico Janssen for positively identifying these spacecraft and associating them with object numbers.

Two Line Elements or TLEs, often referred to as Keplerian elements or keps in the amateur community, are the inputs to the SGP4 standard mathematical model of spacecraft orbits used by most amateur tracking programs. Weekly updates are completely adequate for most amateur satellites. Elements in the TLE bulletin files are updated daily. TLE bulletin files are updated to add or remove satellites as necessary Thursday evenings around 2300 UTC, or more frequently if new high interest satellites are launched. More information may be found at https://www.amsat.org/keplerian-elements-resources/

[ANS thanks Joe Fitzgerald, KM1P, AMSAT Orbital Elements Manager for the above information.]

ARISS NEWS

Amateurs and others around the world may listen in on contacts between amateurs operating in schools and allowing students to interact with astronauts and cosmonauts aboard the International Space Station. The downlink frequency on which to listen is 145.800 MHz worldwide.

+ Upcoming Contacts

Carl-Maria-von-Weber-Schule Eutin, Eutin, Germany, direct via DKØOH/Telebridge and Gymnasium in Loekamp, Marl, Germany, telebridge via DKØOH.
The ISS callsign is presently scheduled to be OR4ISS.
The scheduled crewmember is Andreas Mogensen, KG5GCZ.
The ARISS mentor is IN3GH.
Contact is go for Monday, December 4, 2023 at 11:36 UTC.

Orangeburg Christian Academy, Orangeburg, SC, direct via N7GZT.
The ISS callsign is presently scheduled to be NA1SS.
The scheduled crewmember is Jasmin Moghbeli, KI5WSL.
The ARISS mentor is KD8COJ.
Contact is go for Tuesday, December 5, 2023 at 15:19 UTC.
Watch for Livestream at https://www.facebook.com/orangeburgchristianacademy

Obninsk, Russia, direct via TBD.
The ISS callsign is presently scheduled to be RSØISS.
The scheduled crewmember is Konstantin Borisov.
The ARISS mentor is RV3DR.
Contact is go for Wednesday, December 13, 2023 at 09:15 UTC.

+ Completed Contacts

Gagarin From Space Performance Of An Amateur Radio Communication Session With Pupils Of Schools Of Aznakaevsky District Of The Republic Of Kazakhstan. Tatarstan, Russia, direct via RC4P.
The ISS callsign was RSØISS.
The crewmember was Konstantin Borisov.
The ARISS mentor was RV3DR.
Contact was successful on November 25, 2023 at 14:08 UTC.

The crossband repeater continues to be active (145.990 MHz up {PL 67} & 437.800 MHz down). If any crewmember is so inclined, all they have to do is pick up the microphone, raise the volume up, and talk on the crossband repeater. So give a listen, you just never know.

As always, if there is an EVA, a docking, or an undocking; the ARISS radios are turned off as part of the safety protocol.

Note, all times are approximate. It is recommended that you do your own orbital prediction or start listening about 10 minutes before the listed time.

The latest information on the operation mode can be found at
https://www.ariss.org/current-status-of-iss-stations.html

The latest list of frequencies in use can be found at https://www.ariss.org/contact-the-iss.html

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information.]

Upcoming Satellite Operations

None scheduled at this time.

A growing number of satellite rovers are currently engaged in sharing their grid square activations on https://hams.at. By visiting the website, you gain easy access to comprehensive information about the operators responsible for activating specific grid squares. Additionally, you have the ability to assess the match score between yourself and a particular rover for a given pass, while also being able to identify the upcoming satellite passes that are accessible from your location.

[ANS thanks Ian Parsons, K5ZM, AMSAT Rover Page Manager, for the above information.]

Hamfests, Conventions, Maker Faires, and Other Events

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

AMSAT Ambassador Clint Bradford, K6LCS, says, “Think a 75-minute presentation on “working the easy satellites” would be appropriate for your club or event? Let me know by emailing me at k6lcsclint (at) gmail (dot) com or calling me at 909-999-SATS (7287)!” Clint has NEVER given the exact same show twice: EACH of the 150+ presentations so far has been customized/tailored to their audiences.

Satellite Shorts From All Over

+ Eirsat-11 was successfully launched on Friday, December 1, 2023 from Florida aboard a Space X ride. On the first pass over Europe EIRSAT-1 was almost 10 minutes
late on the preliminary TLE set and almost 4 minutes early on the projected TLE set. The launch team will try to develop better parameters. Since this was a classified launch, TLEs may not be published by he usual sources, so the team will have to develop its own TLE set. [ANS thanks Nico Janssen, PA0DLO, for the above information.]

+ A fascinating article describes the development of the CubeSat standard by AMSAT member Bob Twiggs, KE6QMD, and co-inventor Jordi Puig-Suari, an aerospace engineering professor at California Polytechnic State University. Searching for a way to simplify the projects—and cut out build time — Twiggs thought, “What if we made [the satellite] a cube and put solar cells on all sides so no matter which way it rotated, it was going to get charged?” With some spare solar cells from NASA’s Jet Propulsion Laboratory, he went down to a local shop and found a 4 X 4 X 4-in. transparent box. It was also around that time—in 1999—that an infamous error caught Twiggs’ attention. That year a mix-up between Imperial and metric units by a Lockheed Martin engineering team caused NASA’s Mars Climate Orbiter to burn up in the red planet’s atmosphere, ending the mission early. “I said, ‘It’s about time students learn metric,’” he says. “I wonder what this [4-in. box] is in metric? Well, it turned out to be just almost 10 cm.” Read the entire article at https://tinyurl.com/ANS-337-Twiggs. [ANS thanks Aviation Week Network for the above information.]

+ An innovative experiment flying aboard NASA’s Psyche mission just hit its first major milestone by successfully carrying out the most distant demonstration of laser communications. The tech demo could one day help NASA missions probe deeper into space and uncover more discoveries about the origin of the universe. The experiment beamed a laser encoded with data from far beyond the moon for the first time.

The test data was sent from nearly 10 million miles (16 million kilometers) away and reached the Hale Telescope at the California Institute of Technology’s Palomar Observatory in Pasadena, California. Read the entire article at https://tinyurl.com/ANS-337-Laser. [ANS thanks CNN.com for the above information.]

Join AMSAT today at https://launch.amsat.org/

In addition to regular membership, AMSAT offers membership to:

* Societies (a recognized group, clubs or organization).
* Primary and secondary school students are eligible for membership at one-half the standard yearly rate.
* Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status.
* Memberships are available for annual and lifetime terms.

Contact info [at] amsat.org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week's ANS Editor, Frank Karnauskas, N1UW
n1uw [at] amsat [dot] org